

IN THE DRAWINGS:

The attached sheets of drawings include corrections to FIGS. 10 and 13. These sheets, which also include FIGS. 11 and 14A, replace the original sheets including FIGS. 10, 11, 13 and 14A.

Specifically, FIG. 10 has been revised to change the reference numeral "1005" to --1007-- to eliminate redundancy with previously used reference numerals; and FIG. 13 has been revised to add the reference numeral --1370-- with appropriate arrowhead lead line. No new matter has been added.

REMARKS

Amendments to the Specification

In the specification, amendments have been made to address various typographical errors and paragraph numbering has been inserted. No new matter has been added. These amendments do not surrender any scope of any claim as originally filed.

Amendments to the Claims

The Office Action mailed September 17, 2009, has been received and reviewed. Claims 1, 2, 3, 6 through 12, 16, 18 through 47, 49 through 54, 57, 59, 60, 63 through 65, and 79 through 85 are currently pending in the application. Claims 79 and 83 through 85 stand rejected. Claims 19 through 23, 29 through 47, 49 through 51, 63, and 80 through 82 are withdrawn from consideration. Claims 4, 5, 13 through 15, 17, 48, 55, 56, 58, 61, 62, 66 through 78, and 86 are canceled. Applicants have amended claims 1, 2, 3, 6 through 12, 16, 18 through 47, 49 through 54, 57, 59, 60, 63 through 65, and 79, and respectfully requests reconsideration of the application as amended herein.

In the claims, amendments have been made to enhance the clarity of the claim language and to correct typographical errors in the claims as-filed. These amendments are not intended to surrender any scope of the claims. Selected additional amendments to the claims, where additional elements have been added, are intended to enhance the specificity of the subject matter claimed. Support for the current claim amendments may be found throughout the application as-filed, for example, in the claims as-filed and at paragraphs [0131] through [0137] and FIGS. 11, 12A, and 12B. Again, no new matter has been added.

Election of Species Requirement

As an initial matter, Applicants' Counsel would like to apologize for the inconvenience to the Examiner regarding the previous Office Actions and the identification of claims in the election of species required by the Examiner. Applicants' Counsel is successor counsel to the original Counsel who drafted the instant application. As such, there has been some confusion and inconsistencies regarding the election of species and which claims read upon the species currently elected for examination. The confusion appears to be caused by the addition of the

limitation “a secondary wick” which was made to the majority of the independent claims in a Preliminary Amendment filed by the original Counsel. Again, Applicants’ Counsel would like apologize for this confusion and ask for the Examiner’s patience while Applicants’ Counsel prepares the instant application for a meaningful examination including the claims relevant to the current elected species.

As noted by the Examiner in the outstanding Office Action, Applicants previously elected Species V, as shown in FIGS. 11, 12A, 12B, 13, and 14A through 19D. The Examiner asserts that claims 79 and 83 through 85 read on the current elected species. Applicants agree with the Examiner that claims 79 and 83 through 85 read on the current elected species and affirm the election of Species V including claims 79 and 83 through 85. However, in the current amendment, Applicants propose to amend independent claims 1 and 52 to remove the limitation “a secondary wick,” thereby, making claims 1 and 52 (and selected claims depending therefrom) readable on the elected Species V. Furthermore, any claims depending from claims 1 and 52 that are not readable on the currently elected Species V are withdrawn from consideration.

Applicants realize that the Examiner need not enter the current amendments to these claims at this time. However, Applicants ask the Examiner, in order to correctly identify and examine the claims that were originally intended to read on the species shown in FIGS. 11, 12A, 12B, 13, and 14A through 19D, to enter the current amendments to these claims and to consider claims 1 and 52 (including the remaining dependant claims that have not been either withdrawn or canceled) in addition to the four claims currently being examined. Applicants point out that claims 1 and 52 recite, in part, an evaporator for a heat transfer system including “a heated wall,” “a liquid barrier wall,” “a primary wick,” “a vapor removal channel,” and “a liquid flow channel.” Applicants note that such an evaporator reads on the evaporator shown in FIGS. 11, 12A, 12B, 13, and 14A through 19D and, therefore, reads on the currently elected Species V. Applicants also note that the limitations recited in claims 1 and 52 contain substantially the same limitations as the limitations recited in claim 79 which is currently being examined. As such, Applicants believe that it should not be a serious burden on the Examiner to include these claims with the claims currently being examined.

In view of the above, Applicants thank the Examiner for her patience regarding the election of species and note that currently each of claims 1, 2, 3, 6 through 12, 16, 18, 24 through

28, 52 through 54, 57, 59, 60, 64, 65, 79, 83 through 85 reads on the currently elected Species V. Therefore, Applicants respectfully ask that these claims be considered for examination at this time.

Objections to the Abstract

As shown in the substitute specification, the Abstract has been amended to include the method of transferring heat set out in the claims that read on the currently elected Species V.

Claim Objections

Claims 79 and 83 through 85 are objected to due to informalities in the claim language. Appropriate correction has been made. Applicants thank the Examiner for pointing out the informalities.

35 U.S.C. § 112 Claim Rejections

Claims 79 and 83 through 85 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Regarding claim 79, the Examiner asserts that “it appears that the limitation ‘within the liquid flow channel’ in line 9 of the claim is erroneously recited as such and should be replaced with ‘within the vapor removal channel’ or similar; it does not appear that any vapor is disclosed as being formed within the liquid flow channel.” Applicants note that the rejected claim language has been removed from the claim.

The Examiner further asserts that “the term ‘near’ in claim 79 is a relative term which renders the claim indefinite.” Applicants note that the rejected claim language has been removed from claim 73.

Regarding claim 84, the Examiner asserts that “the term ‘significant’ in claim 84 is a relative term which renders the claim indefinite.” Applicants note that the rejected claim language has been removed from claim 84.

Regarding claim 83, the Examiner asserts that “the limitations ‘further comprising reducing leakage of heat from the vapor barrier wall, through the primary wick, toward the liquid

barrier wall' appear to have one or more words missing therefrom, thus further rendering indefinite the intended scope of protection sought by the claim." Applicants note that the rejected claim language has been removed from claim 83.

In view of the above, applicants assert that claims 79 and 83 through 85 particularly point out and distinctly claim the subject matter of the invention to comply with the provisions of 35 U.S.C. § 112. Therefore, claims 79 and 83 through 85 are allowable under the provisions of 35 U.S.C. § 112.

35 U.S.C. § 102(b) Anticipation Rejections

Anticipation Rejection Based on Baker (U.S. Patent No. 5,816,313)

Claims 79 and 83 through 85 were rejected under 35 U.S.C. § 102(b) as being anticipated by Baker (U.S. Patent No. 5,816,313).

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Unless a single prior art reference describes "all of the limitations claimed" and "all of the limitations [are] arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102." *Net MoneyIN Inc. v. VeriSign Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008). A single prior art reference must "clearly and unequivocally" describe the claimed invention "without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference." *Id.* (citing *In re Arkley*, 455 F.2d 586, 587 (C.C.P.A. 1972)).

Independent Claim 79 and Dependent Claims 83 through 85

Applicants assert that independent claim 79 is not anticipated by Baker under 35 U.S.C. § 102(b) because Baker does not describe each and every element of independent claim 79, as currently amended. In particular, Baker does not describe a method of transferring heat comprising "pumping the liquid from the liquid flow channel through the primary wick

extending from a portion of the liquid barrier wall to a portion of the heated wall” and “evaporating at least some of the liquid at a vapor removal channel defined at an interface between the primary wick and the heated wall,” as recited in amended independent claim 79.

Baker describes a heat transport system with a cold plate thermally coupled to the equipment and a capillary-wick evaporator. *Baker*, Abstract. As shown in FIG. 1a, a cold plate 10 having heat-generating equipment mounted thereon couples the heat to an evaporator 11, through its housing 12, to a wick 16 associated with a coolant liquid supply tube 14. *Id.* at col. 4, lines 31-47. The wick 16 is wetted by the liquid coolant, and absorbs heat from cold plate 10. *Id.* The absorbed heat is transferred to the coolant liquid which saturates the wick 16, and coolant vapor is formed in the chamber defined by housing 12. *Id.* The heat-laden coolant vapor flows through a pipe 18, and through a check valve 20, oriented for fluid flow in the direction of the arrow, to the vapor input port 22 of a heat exchanger or condenser 24. *Id.* The coolant vapor then enters heat exchanger 24, and heat is extracted from the coolant vapor, in known fashion, to condense the coolant vapor to liquid coolant form, and then to supercool the coolant liquid. *Id.*

Applicants respectfully assert, however, that Baker does not describe that the heat transport system described therein includes pumping the liquid from the coolant liquid supply tube through the wick extending from a liquid barrier wall to a heated wall and evaporating some of the liquid at a vapor removal channel defined at an interface between the wick and a heated wall. As shown in FIGS. 1a and 1b, the wick 16 is placed in the housing 12 of the evaporator 11 and is only associated with the coolant liquid supply tube 14. Furthermore, the pipe 18 that removes vapor formed in the housing 12 is not defined at an interface between the wick 16 and a heated wall. Therefore, Baker does not describe a method of transferring heat as recited in amended independent claim 79 because the wick described in Baker does not extend to a heated wall having a vapor removal channel located at an interface between the primary wick and a heated wall.

As Baker does not expressly or inherently describe each and every element set forth in independent claim 79, Applicants assert that claim 79 is not anticipated by Baker and respectfully request that the Examiner withdraw the rejection of independent claim 79 under 35 U.S.C. § 102(b).

Applicants additionally assert that each of dependent claims 83 through 85 is allowable at least because each depends from claim 79, which is allowable. Therefore, Applicants assert that claims 83 through 85 are not anticipated by Baker and respectfully request that the Examiner withdraw the rejection of these dependent claims under 35 U.S.C. § 102(b).

Independent Claims 1 and 52 and Dependent Claims 2, 3, 6 through 12, 16, 18, 24 through 28, 53, 54, 57, 59, 60, 64, 65

If the Examiner allows claims 1, 2, 3, 6 through 12, 16, 18, 24 through 28, 52 through 54, 57, 59, 60, 64, and 65 which, as amended, read on the currently elected Species V, Applicants assert that Baker does not describe each and every element of either independent claim 1 or independent claim 52, as currently amended. In particular, Baker does not describe an evaporator for a heat transfer system comprising “a primary wick extending from a portion of the heated wall to a portion of the liquid barrier wall” and “a vapor removal channel that is located at an interface between the primary wick and the heated wall,” as recited in both amended independent claim 1 and amended independent claim 52.

For the same reasons discuss above regarding claim 79, the heat transport system described by Baker does not include a wick extending from a liquid barrier wall to a heated wall and a vapor removal channel located at an interface between the primary wick and the heated wall because the wick described in Baker does not extend to a heated wall having a vapor removal channel located at an interface between the primary wick and a heated wall.

In view of the above, Baker does not expressly or inherently describe each and every element set forth in either independent claim 1 or independent claim 52. Therefore, Applicants assert that independent claims 1 and 52 are not anticipated by Baker and respectfully request that the Examiner withdraw the rejections of independent claims 1 and 52 under 35 U.S.C. § 102(b).

Applicants additionally assert that each of dependent claims 2, 3, 6 through 12, 16, 18, 24 through 28, 53, 54, 57, 59, 60, 64, 65 is allowable at least because each depends from either independent claim 1 or independent claim 52, which are allowable. Therefore, Applicants assert that claims 2, 3, 6 through 12, 16, 18, 24 through 28, 53, 54, 57, 59, 60, 64, 65 are not anticipated by Baker and respectfully request that the Examiner withdraw the rejection of these dependent claims under 35 U.S.C. § 102(b).

Withdrawn Claims/Rejoinder

It is noted that claims 80 through 82 are withdrawn from consideration as directed to a nonelected invention. Applicants note that claims 80 through 82 depend from claim 79. Therefore, claims 80 through 82 should be rejoined and allowed in conjunction with the allowance of claim 79.

It is further noted that, if the Examiner allows the inclusion of claim 1 into the currently elected Species V, claims 19 through 23 are withdrawn from consideration as directed to a nonelected invention. However, Applicants note that claims 19 through 23 depend from claim 1. Therefore, claims 19 through 23 should be rejoined and allowed in conjunction with the allowance of claim 1.

It is further noted that, if the Examiner allows the inclusion of claim 52 into the currently elected Species V, claim 63 is withdrawn from consideration as directed to a nonelected invention. However, Applicants note that claim 63 depends from claim 52. Therefore, claim 63 should be rejoined and allowed in conjunction with the allowance of claim 52.

It is finally noted that, if the Examiner allows the inclusion of claim 1 into the currently elected Species V, claims 29 through 47 and 49 through 51 are withdrawn from consideration as directed to a nonelected invention. However, Applicants note that independent claim 29, as amended, and claims 30 through 47 and 49 through 51 depending therefrom, require all the limitations of claim 1. Therefore, independent claim 29, and claims 30 through 47 and 49 through 51 depending therefrom, should be rejoined and allowed in conjunction with the allowance of claim 1.


ENTRY OF AMENDMENTS

Entry of the amendments, as set forth herein and in the Appendices attached hereto, is respectfully requested. These amendments are supported by the as-filed specification and drawings and do not add any new matter to the application.

CONCLUSION

Claims 1, 2, 3, 6 through 12, 16, 18 through 47, 49 through 54, 57, 59, 60, 63 through 65, and 79 through 85 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, the Examiner is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,



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